DOCUMENT RESUME

ED 481 718 TM 035 313

AUTHOR	Dougherty, Chrys
TITLE	Nine Essential Elements of Statewide Data-Collection Systems.
SPONS AGENCY	Education Commission of the States, Denver, CO.; Just for the Kids, Austin, TX.; Texas Univ., Austin.
PUB DATE	2003-00-00
NOTE	9p.; Produced by the National Center for Educational Accountability.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	*Data Collection; Database Management Systems; *Information Management; Records Management; *State Departments of Education; *Student Records

ABSTRACT

State education agencies are increasingly building the capacity to collect and manage sizable quantities of information about schools and districts and to match individual student records over time and across databases. An adequate statewide student data-collection system makes it easier for a state to meet legal reporting requirements such as those under the No Child Left Behind Act of 2001. An adequate statewide data collection system has nine key elements: (1) unique statewide student identifier; (2) student-level enrollment data; (3) student-level state test data; (4) information on untested students; (5) student-level course-completion data; (6) student-level Scholastic Assessment Test, ACT Assessment, and Advanced Placement test results; (7) student-level graduation and dropout data; (8) state data audit process; and (9) ability to match K-12 and higher education data. (SLD)

Reproductions supplied by EDRS are the best that can be made
from the original document.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
J. Ivey
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
1

TM
TMTR 0249

ED 481 718

Essential Elements

OF STATEWIDE DATA-COLLECTION SYSTEMS

TM035313

BEST COPY AVAILABLE
2

UNIQUE STATEWIDE STUDENT IDENTIFIER

Assignment of a unique statewide student identifier ensures every student in the system is accounted for and no student falls through the cracks. Such an identifier makes it possible to match individual student records across various K-12 education databases, converting "snapshots" of students into a motion picture of progress over time. A state education agency that matches records of the same students from one test administration to the next is in a position to look at the annual academic growth of those students.

Questions that can be answered only by matching individual student records over time include the following:

- **What is the academic "value added" of a school or program?**
- **Are low test scores in a school tied to student mobility?**
- **What performance levels in 4th grade provide a reliable indicator that students are on track to succeed in 8th grade and high school?**
- **What performance levels are thresholds for intervention?**

STATE POLICY ACTIONS

- The state assigns each student a unique statewide student identifier that can be used to match records accurately across databases and years.
- The state develops procedures to ensure no two students are assigned the same identifier and when a student moves, he or she keeps the same identifier.

STUDENT-LEVEL ENROLLMENT DATA

Accurate information on student enrollment, demographics and program participation is essential to evaluate the performance of schools and programs, and take into account student mobility and continuous enrollment. It is also necessary for the correct disaggregation of test data for students in various categories – special education, English Language Learner, and free and reduced-price lunch.

Student-level information on enrollment, demographics and program participation should be collected at a different time from when state tests are administered. At testing time, the focus is on administration and security, not on creating an accurate record of which students are enrolled in bilingual education or in the free and reduced-price lunch program.

STATE POLICY ACTIONS

- The state collects information at least annually on each student's campus of enrollment, grade level, gender, ethnicity, economic disadvantaged status, English Language Learner status, participation in bilingual or English-as-a-Second-Language program, special education status, migrant status, gifted and talented status.

BEST COPY AVAILABLE

- At least one data collection for each of these items occurs at a time different from when the test is administered.
- At least one enrollment data collection takes place in the fall.
- The information is stored permanently, not temporarily, in a state database.

STUDENT-LEVEL STATE TEST DATA

A statewide database of individual student scores on state exams should be maintained and capable of disaggregating the results by individual test item and objective. Although the state may update its student test database with demographic and program participation information collected at the time of the test, this should not be the only time such information is collected, and school districts ought not rely on students to provide it. The best procedure is to merge demographic and program information contained in the student-level enrollment database into the test database.

Such a database can provide valuable diagnostic information to teachers and principals. Having this information stored in a statewide database makes it easier for the information to follow the student as he or she changes districts. If the test is properly designed and the state can match individual student records over time, then it becomes possible to measure year-to-year student academic growth.

STATE POLICY ACTIONS

- The state makes available to teachers student-level test score information on state exams that can be broken out by specific skill areas within each subject.
- The state collects and permanently stores information on each student's test score in each subject. The information may be disaggregated by skill or skill area for each student.
- The state uses the statewide database to measure year-to-year student academic growth. This depends on the design of the test and the ability to match individual student records over time.

INFORMATION ON UNTESTED STUDENTS

To prevent schools from concealing students unlikely to do well on the test, a record must exist for each untested student in a tested grade, with information on why that student was not tested. NCLB requires states to keep track of the number and percentage of students who are not tested. Maintaining individual records on such students and matching those records to a separate enrollment database makes it possible to account for students from different groups – for example, special education students or English Language Learners – and to check for unusually high rates of absenteeism for certain groups.

STATE POLICY ACTIONS

- The state maintains a record for each untested student in a tested grade that includes information on why the student was not tested.

STUDENT-LEVEL COURSE-COMPLETION DATA

Student completion of advanced courses in high school is an important indicator of students readiness for college. It is possible to analyze how many students enroll in advanced courses as a function of how well-prepared those students were for high school by matching high school course-completion data to 8th-grade test scores.

BEST COPY AVAILABLE

STATE POLICY ACTIONS

- The state collects individual course-completion records for all courses taken for high school credit, including:
  - Courses taken during the regular fall and spring semesters
  - Summer school courses
  - Courses taken in middle school for high school credit, such as algebra
  - Courses taken at local colleges for dual credit
  - Credits transferred from private high schools or home schooling
  - Credit received for distance learning.
- Titles of each course are collected by the state, numbered consistently and stored in a statewide course-completion database.

STUDENT-LEVEL SAT, ACT AND ADVANCED PLACEMENT TEST RESULTS

In addition to completion of advanced courses, student participation and success on SAT, ACT and Advanced Placement tests are good indicators of students' college readiness. It is possible to identify how many students demonstrate college-readiness skills as a function of how well-prepared those students were for high school by matching scores on these high school exams to 8th-grade test scores.

STATE POLICY ACTIONS

- The state collects and permanently stores student-level results by individual exam for each of the following: SAT I, SAT II, ACT and Advanced Placement.

STUDENT-LEVEL GRADUATION AND DROPOUT DATA

Tracking students who drop out or leave school is difficult, but most states can do a better job. States can engage in the following activities to maintain accurate records on unaccounted-for students:

- Maintain a statewide enrollment database
- Match student records over time
- Merge this information with student records on completed diplomas and general equivalency degrees (GED)
- Request school districts to account for missing students
- Spot check or audit "problem" districts.

With the ability to match student records in a statewide enrollment database, it becomes possible to look at "excess attrition" – increases in the percentage of students who leave the state database in the upper grades, compared with the lower grades. Allowing for the fact that out-of-state migration and private and homeschool enrollment may differ in the upper grades, this becomes a way of getting a rough handle on the percent of students each year who are dropping out or enrolling in GED programs.

STATE POLICY ACTIONS

- The state collects and stores student-level graduation and dropout data and tracks missing students.
- The state collects and stores student-level graduation data by diploma type.
- For students in grades 7-12 who were enrolled one year, not enrolled the next and did not graduate, the state collects information from school districts on where each departing student went. This evidence can be used to differentiate among dropouts, transfers, GEDs and students who can't be located.
- The state establishes standards for the evidence that may be used to determine where departing students went.
- The state sets standards for the percent of departing students that districts should be able to locate.
- Consequences are applied to school districts that do a poor job of accounting for missing students.

8 STATE DATA AUDIT PROCESS

Casual reporting by some school districts is a problem in a number of states, and it is likely to continue in the absence of checks on the accuracy of the data they submit. States need a well-developed process to identify data that are likely to be in error, to spot check other information on a random basis and to conduct site visits to audit the accuracy of the data. In addition, states must be prepared to impose consequences on districts for submitting incomplete or incorrect information. For example, in 1999, the Texas Education Agency publicly rated two school districts as "unacceptable due to data quality" in the state accountability system.

STATE POLICY ACTIONS

- The state performs statistical checks on data submitted by school districts.
- The state sets criteria for determining when data submitted by districts are likely to be in error.
- The state has a system for investigating the accuracy of data that are flagged by the statistical checks.
- The state has a system for spot checking the accuracy of data in cases not flagged by statistical checks.
- The state imposes consequences on school districts that do a poor job of collecting and submitting accurate and complete information.

9 ABILITY TO MATCH K-12 AND HIGHER EDUCATION DATA

To make connections between students' performance in high school and their success in college, states must be able to match records of individual students between the K-12 and postsecondary education systems. Just as K-12 information should be in a central database accessible to school districts, so should student-level postsecondary education records be accessible to analysts.

STATE POLICY ACTIONS

- The state can match student-level records between its K-12 and public higher education institutions.
- The higher education information that can be matched includes student records on enrollment, degrees and certificates received, course completion, graduation and performance on mandated state tests administered by the higher education system.
- The state maintains a central repository for these data for all its public higher education institutions.

CONCLUSION

Many educators and policymakers are just beginning to recognize the potential uses of data when states collect the right information and are able to match individual student records over time. The right information makes it possible to:

- **Evaluate the effectiveness of schools and programs**
- **Identify consistently high-performing schools so that educators and the public can learn from best practices**
- **Promote early and timely intervention**
- **Focus school systems on preparing a higher percentage of students to succeed in advanced high school courses and in college.**

With good data, states not only will be able to comply with federal laws, they also will be able to give educators, parents and policymakers the information they need to improve schools.

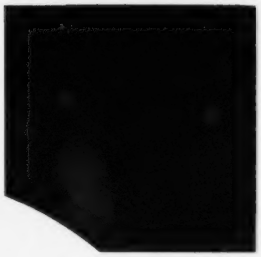
This paper was written by Chrys Dougherty, director of research for the National Center for Educational Accountability.

BEST COPY AVAILABLE

The National Center for Educational Accountability is a joint venture of Just for the Kids, the Education Commission of the States and the University of Texas at Austin. The center's mission is to help state leaders use data to monitor, analyze and improve student and school performance.

This publication was made possible through generous support from the Atlantic Philanthropies.

INTRODUCTION



More and more, state education agencies are building the **capacity to collect** and **manage sizable quantities of information** about schools and districts, and to match **individual student records** over time and across **databases**.

An adequate statewide student **data-collection system** makes it easier for a state to meet legal reporting **requirements** such as those under the No Child Left Behind Act of 2001 (NCLB). It also makes possible the analyses necessary to help educators **evaluate programs and policies, identify and study best practices, and continuously improve schools.**

An adequate statewide data-collection system has **nine key elements:**

1. **Unique statewide student identifier**
2. **Student-level enrollment data**
3. **Student-level state test data**
4. **Information on untested students**
5. **Student-level course-completion data**
6. **Student-level SAT, ACT and Advanced Placement test results**
7. **Student-level graduation and dropout data**
8. **State data audit process**
9. **Ability to match K-12 and higher education data.**

This paper describes the importance of each of these elements and the policy implications for states.

BEST COPY AVAILABLE

National Center for Educational Accountability

4030-2 W. Braker Lane
Austin, TX 78759
Tel 512.232.0770
Fax 512.232.0777
www.nc4ea.org

The National Center for Educational Accountability, led by Dallas businessman Tom Luce, is a joint venture of the Education Commission of the States, Just for the Kids and the University of Texas at Austin. The center's mission is to help educators, policymakers and the public use data to monitor and improve student and school performance. The center's work focuses on:

- **Using academic performance data to identify consistently high-performing schools and districts**
- **Comparing each school's performance with that of the highest-performing schools and districts**
- **Researching best practices of consistently high-performing schools and districts**
- **Communicating best practices research results in a way that they can easily be applied to improve schools.**

SPONSORING ORGANIZATIONS:

The Education Commission of the States is a nonprofit, nationwide interstate compact formed in 1965 to help state leaders identify, develop and implement public policy for education that addresses current and future needs of a learning society.

700 Broadway, Suite 1200 • Denver, CO 80203-3460
Tel 303.299.3600 / Fax 303.296.8332 • www.ecs.org

Education Commission of the States

Just for the Kids is a nonprofit entity established in 1995 that works with educators and the public to gauge the academic success of public schools and to identify promising strategies in high-performing schools.

4030-2 W. Braker Lane • Austin, TX 78759
Tel 512.232.0770 / Fax 512.232.0777 • www.just4kids.org

Just for the Kids

The University of Texas at Austin is a major research university and home to more than 48,000 students, 2,700 faculty and 17,000 staff members. The university's activities support its core purpose: to transform lives for the benefit of society through the core values of learning, discovery, freedom, leadership, individual opportunity and responsibility.

The University of Texas at Austin • 1 University Station
Austin, TX 78712 • www.utexas.edu.

THE UNIVERSITY OF TEXAS AT AUSTIN

BEST COPY AVAILABLE

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

X	This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.
	This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").